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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/527,529	03/16/2000	Hironori Kikkawa	69605/99	2200

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EXAMINER

NGUYEN, DUNG T

ART UNIT PAPER NUMBER

2871

DATE MAILED: 03/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/527,529

Applicant(s)

KIKKAWA ET AL.

Examiner

Dung Nguyen

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raynes et al., US Patent No. 5,541,753.

Regarding claims 1 and 3-6, Raynes et al. disclose a liquid crystal display (LCD) device (figure 6) comprising:

- . a pair of substrates (6, 7);
- . a liquid crystal layer (12), wherein liquid crystal molecules oriented to bend alignment;
- . a phase compensation plate (30, 31) provided outside of each of the substrates;

. a retardation of a light passing through the liquid crystal layer and all phase compensation plates being set to a value $\lambda/2$ or $\lambda/4$ (when $M=1$) and λ is a wavelength of visible light (claim 10).

Although Raynes et al. do not explicitly disclose a retardation value of a minimum wavelength of the light relating to display (i.e., blue color range of 380nm to 488nm), Raynes et al. do disclose that the retardation value of visible wavelength (i.e., range of 400nm to 700nm). Thus, such disclosed range in Raynes et al. makes possible the claimed range of 380nm to 488nm, and such overlapping ranges are at least obvious. *In re Malagari*, 499 Fed.2d 1297, 182 USPQ 549 CCPA 1974.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Raynes et al., US Patent No. 5,541,753, in view of Applicant's submitted prior art, Kuo et al., SID 94 Digest, Volume XXV, page 927-930.

Regarding claim 2, Raynes et al. disclose the claimed invention as described above except for a birefringent index of the liquid crystal molecules is equal to or less than 0.16. However, Kuo et al. do disclose liquid crystal molecules having a birefringent index which is less than 0.16 (see table 2) can be used in an LCD device. Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to modify the Raynes et al. liquid crystal molecules having a birefringent index which is less than 0.16 as shown by Kuo et al. in order to reduce a retardation value of a liquid crystal layer, so as to reduce light leakage in the large viewing angle of an LCD device(see page 929, left column, line 11).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Castleberry (US 5107356) disclose an LCD device using two phase compensation plates (figure 1) and having a liquid crystal material with a birefringent index of 0.085 (col. 6, ln. 63).


Nakamura (US 5,774,197) disclose an LCD device having a total retardance in the range of 0.4 to 0.85 (claim 1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Nguyen whose telephone number is 703-305-0423. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 703-305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7726 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

DN
February 24, 2003


Dung Nguyen
Patent Examiner
GAU 2871